

IN THE SPECIFICATION:

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~striketrough~~.

Please REPLACE the paragraph beginning at page 29, line 10, with the following paragraph:

The gate driver 716f of the positive polarity side includes a pulse amplifier F1 for inverting and amplifying the control signal Si with a logic level to the amplitude of approximately 10 volts, a coupling capacitor C3 for separating potentials, a ~~eramp~~clamp diode D5, a ~~eramp~~clamp resistor R3 and a gate resistor R4. In the same way, the gate driver 716f of the negative polarity side includes a pulse amplifier F2, a coupling capacitor C4, a ~~eramp~~clamp diode D6, a ~~eramp~~clamp resistor R5 and a gate resistor R6. In the constant-current sources 715f and 725f, the source resistors R1f and R2f for determining the output current value can be fixed but are variable resistors in this example so that the current can be set at any value.

Please REPLACE the paragraph beginning at page 29, line 23, with the following paragraph:

The circuit operation of the positive polarity side will be explained as a type. The control signal Si amplified by the pulse amplifier F1 is applied to the gate of the transistor Qi via the coupling capacitor C3. The coupling capacitor C3, the diode D5 and the resistor R3 constitute a ~~eramp~~clamp circuit having a time constant $C3 \times R3$. If the time constant is sufficiently larger than the pulse width of the input control signal, the output signal of the pulse amplifier F1 becomes a pulse signal that drops to $+V - 10$ volts with respect to the power source potential $+V$. The gate resistor R4 is an element having the resistance of a few ten ohms for stabilizing the operation and does not affect the amplitude of the pulse signal. For example, when a capacitance of the coupling capacitor C3 is 0.1 microfarads and a resistance of R3 is 220 kilohms, the time constant becomes 22 milliseconds. As a result, a drop of the amplitude (a sag) in a flat portion of the pulse is restricted less than 1% even if the pulse width of the control signal is 200 microseconds. The IC TC4425 can be used for the pulse amplifier F1, and 1S1588 (a small signal diode) can be used as the diode D5.